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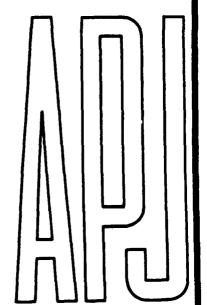




## ILS ELEMENT E15 COST ANALYSIS AND FUNDING

Distribution Program and User's Manual Version 1.0

**APJ 966-680** 





AMERICAN POWER JET CO. RIDGEFIELD N.J

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DISTRIBUTION STATEMENT X

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REPORT DOCUMENTATION PAGE					Form Approved OMB No. 0704-0188		
	1a. REPORT SECURITY CLASSIFICATION UNCLASSIFIED			1b. RESTRICTIVE MARKINGS			
2a. SECURITY CLASSIFICATION AUTHORITY				3. DISTRIBUTION/AVAILABILITY OF REPORT			
2b. DECLASS	FICATION/DO	WNGRADING SCHEDU	LE	UNLIMITED			
4. PERFORMING ORGANIZATION REPORT NUMBER(S)				5. MONITORING ORGANIZATION REPORT NUMBER(S)			
i e	6a. NAME OF PERFORMING ORGANIZATION  AMCCOM, Army  6b. OFFICE SYMBOL (If applicable)  AMSMC-MAE-EA			7a. NAME OF MONITORING ORGANIZATION			
•	(City, State, ar		<u> </u>	7b. ADDRESS (City, State, and ZIP Code)			
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8c. ADDRESS	(City, State, and	d ZIP Code)	<u></u>	10. SOURCE OF F	UNDING NUMBERS	5	·
				PROGRAM ELEMENT NO.	PROJECT NO.	TASK NO.	WORK UNIT ACCESSION NO.
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16 SUPPLEME	NTARY NOTA	TION					
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This User's Manual is the complete user documentation package, and is provided for guidance in using the APJ software. This User's Manual refers to Version 1.0 of the ILS Assessment software. The software permits you to carry out a coherent, orderly and reproducible assessment of ILS Element E15, Cost Analysis and Funding. The software automates the assessment of ILS Element E15, Cost Analysis and Funding, and follows the requirements of APJ Report 966-229, structured Design - ILS Review Element E15 - Cost Analysis and Funding. It is designed to assess ILS performance as defined in AR 700-127. ILS software guides the user through the assessment by providing a series of questions which may readily be tailored to the weapon system and life cycle stage.							
_			21. ABSTRACT SECURITY CLASSIFICATION UNCLASSIFIED				
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DATA REPOSITORY, YIELDS ACTIONABLE: RESULTS, ASSESSMENT LOGIC, COST PERFORMANCE, SCHEDULE RISK MODULE, DATA REQUIREMENTS, DETAILED IMPLEMENATION PROCESSES, STANDARD OUTPUT REPORTS, ILS ASSESSMENT SOFTWARE, AUTOMATED ASSESSMENT PROCEDURE, ILS/LSA MANAGEMENT AND REVIEW, LOGISTIC RELATED INVESTMENTS, LOGISTIC RELATED OPERATIONS AND SUPPORT, COST ANALYSIS DOCUMENTATION, COST ANALYSIS AND FUNDING.

### **APJ 966-680**

### **ILS ELEMENT E15 COST ANALYSIS AND FUNDING**

**Distribution Program and User's Manual** Version 1.0

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### **HQ US AMCCOM** INTEGRATED LOGISTIC SUPPORT OFFICE **AMSMC-LSP ROCK ISLAND, IL**

by

**AMERICAN POWER JET COMPANY** 

RIDGEFIELD, NJ

ST. LOUIS, MO

WILLIAMSBURG, VA ARLINGTON, VA

**April 1991** 

### **PLEASE READ THIS**

This manual is intended to demonstrate the ILS Assessment Software and aid the user in becoming familiar with its operation. The screens illustrated in this manual, are intended as a guide to help the analyst through the software operation and provide a sense of "what it looks like". The following ILS review areas have been made the subject of automation:

El - Maintenance Planning

Ell - Design Influence

E12 - Standardization and Interoperability

E13 - RAM-D

E14 - Support Management and Analysis

E15 - Cost Analysis and Funding

Because a single automated procedure with a consistent human interface is the objective of APJ's efforts, the analysis structure, screens and operating procedure are identical for each ILS assessment area.

To avoid cumbersome repetition, we have used E1 Maintenance Planning as illustrative displays for all manuals regardless of subject.

The specific assessment questions for each of the other ILS areas (E1, E11, ... etc.) are set forth in the respective automated screens, reports, and Help. To facilitate review and planning of each assessment task, the Data Flow Diagrams and questions are reproduced in Appendices A and B respectively of the manual corresponding to the given task.

The information contained in this manual is generic, and is weapon system and life cycle phase independent. It is designed to be readily structured for any specific weapon system and life cycle stage, and facilities are provided to tag each pertinent question so that attention may be focused on remunerative issues.

#### **FOREWORD**

This manual supports the automation of the Structured Analysis of Integrated Logistics Support (ILS) functions. It is the complete user documentation package, and is provided solely for guidance in using the APJ software.

The ILS assessment software is a unified and iterative approach to the management of logistic support throughout the life of a Weapon System. It enables the user to review logistic support decisions and, if required, establish corrective actions.

The automated ILS system is being developed by the American Power Jet Co. (APJ), under contract to Hqs AMCCOM. A major goal of the project is to unify the military and contractor approach to the performance of ILS. This approach was validated by AMCCOM, and necessary adjustments were made to attain a fully useful and user-friendly program.

APJ has used Structured Analysis and Design to develop the ILS assessment logic in accordance with AR 700-127 "Integrated Logistic Support".

The Structured Analysis and Design for ILS Element E15 (Cost Analysis and Funding) was presented in APJ Reports 966-211 and 966-229. APJ's task performance has been closely coordinated with the Army Logistic Evaluation Agency and AMCCOM. Their assessment experience has been captured in APJ's logic through continued coordination and review at the working level.

The application software functions as an automated assessment technique and data repository that insures the ILS review is complete and yields actionable results. The assessment logic provides a determinate definition of data requirements, detailed implementation processes, and standard output reports. Additionally, a cost, performance, and schedule risk module has been created for each process.

The ILS assessment software is available through HQ AMCCOM, AMSMC-LSP to program managers, ILS functional area representatives, and review activity personnel. It provides guidance and a means of assessing ILS performance by using the automated assessment procedure. Through the use of this procedure, problems may be quickly identified and resolved before testing and milestone reviews.

The Structured Analysis for ILS Element E15, Cost Analysis and Funding contains the following four (4) major modules:

- 1. ILS/LSA Management and Review
- 2. Logistic Related Investments
- 3. Logistic Related Operations and Support
- 4. Cost Analysis Documentation

#### NOTE

A bar in the left hand margin of any paragraph indicates changes from the Beta Test version of this manual.

This work was performed by a task team for APJ: George Chernowitz, James M. Ciccotti, Scott Lerman, and William Villon. The manual was prepared by Arthur Kreitman; editing and typing support were most competently provided by Barbara Boren and Denise Montanez.

We gratefully acknowledge the significant contributions made to the quality of this product by Messrs. T. Merritt of LEA and M. Finkel of AMSAA, H.M. Orrell and A. Mraz of OPTEC, and to the reviewers of this work at DCSLOG and Deputy ASA for Logistics, Department of Army. The support of Messrs. Ned A. Shepherd and Ron Duclos of AMCCOM, AMSMC-LSS is gratefully acknowledged for their assistance in many regards.

All comments on this version are welcome and should be addressed to:

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#### **CHAPTER 1**

#### INTRODUCTION

#### 1.1 GENERAL.

#### USER'S GUIDE

- | 1.1.1 This User's Manual accompanies Version 1.0 | of the ILS Assessment software. The software | permits you to carry out a coherent, orderly and | reproducible assessment of ILS Element E-15, Cost | Analysis and Funding. It is part of an APJ | originated structure for addressing all of the ILS | areas in AR 700-127.
  - 1.1.2 This is designed to serve activities concerned with assessing ILS performance as defined in AR 700-127 and establishing its cost, schedule, performance and sustainability implications. Provision is made for such assessments at both the overall and detailed levels.
  - 1.1.3 The user is guided through a series of questions which may readily be tailored according to the weapon system characteristics and life cycle stage. The overall set of questions and their organization are provided in Appendices A and B.
  - 1.1.4 An important feature is a fully articulated guide to performing the assessment through a system of help screens, with a hypertext selection menu. This help system may likewise be tailored to the specific weapon system and life cycle stage.

#### 1.2 SCOPE.

**COVERS AR** 700-127

1.2.1 The Department of the Army has a requirement for management control of contractor and government requirements for implementation of AP. 700-127, (Integrated Logistic Support). Headquarters AMCCOM has initiated action to structure the review of each ILS element, as to the form of the results and the detailed processes involved. This action is necessary to ensure consistency with current US Army policies, procedures and techniques.

#### REVIEW SCOPE

1.2.2 This computer-assisted system will result in uniform development of a logistical database. It addresses all aspects of the ILS assessment elements, as set forth in Department of Army and Department of Defense administrative publications. Furthermore, it will insure uniformity in efforts and products, reproducibility of analyses, and a well defined structure. This system can be coordinated among all participants in the logistic process to arrive at standardized procedures and a common basis for understanding assessment results.

#### GENERIC MANUAL

| 1.2.3 This user's manual is baselined on ILS | Assessment Element El, Maintenance Planning. The | examples of screens and reports shown in this | manual are intended to illustrate the operation of | the software independent of the assessment element. | The process titles may be different is the various | element, but the operation is unchanged.

#### 1.3 ILS REVIEW LOGIC AND ORGANIZATION.

- 1.3.1 This software automates the assessment of ILS Element E15 "Cost Analysis and Funding" and follows the requirements of APJ Report 966-229, "Structured Design-ILS Review Element E15 Cost Analysis and Funding".
- 1.3.2 A detailed Structured Analysis of this review element was developed in APJ report 966-211, "ILS Review Element E15". The detailed Data Flow Diagrams (DFDs) from this Structured Analysis are included as Annex A to this manual, and provide the user with an overview of the logic and approach taken with the analysis.

#### **1.4 ILS SOFTWARE ARCHITECTURE**

1.4.1 The overall concept of assessment is illustrated in Figure 1-1 and is weapon system and life cycle phase independent. ILS software is designed to guide the user through an assessment by providing a series of questions for the analyst to answer. The analyst must select the equipment to

| be assessed and enter an identification before | reaching the main menu. From the main menu the user | can either perform an assessment or generate a report using data from previous assessments.

- 1.4.2 During the process of performing | assessment, the user is guided through a series of | processes and/or subprocesses that enable him to | select a question to be answered. Once a question | is selected, the user selects one of several possible responses. After responding to the I question the user enters an assessment of the | selected answer.
- | 1.4.3 From the main menu the user can generate a I report of the information that has been entered during a current or previous sessions. The output **PROGRAM** | of the generate report can be directed to a | printer, screen or stored as a file.

#### 1.5 SOFTWARE PROVIDED.

1.5.1 The ILS Review Element E15 - Cost Analysis and Funding software is loaded on 360K 5-1/4 inch floppy disks that are provided separately. to Chapter 2 for the equipment required to run this software.

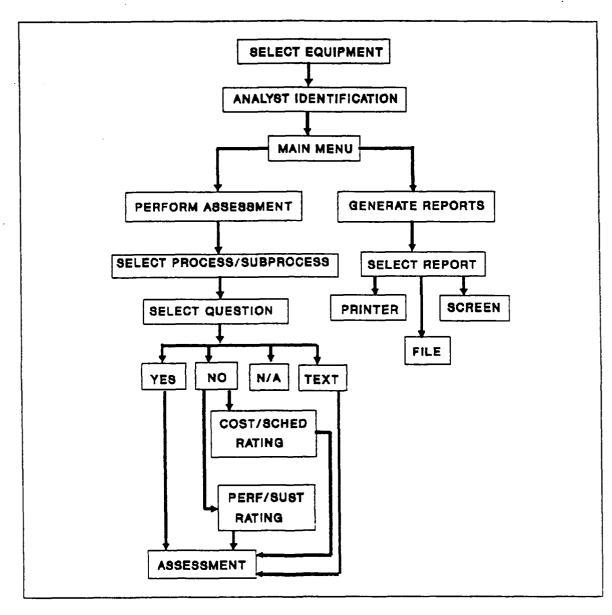
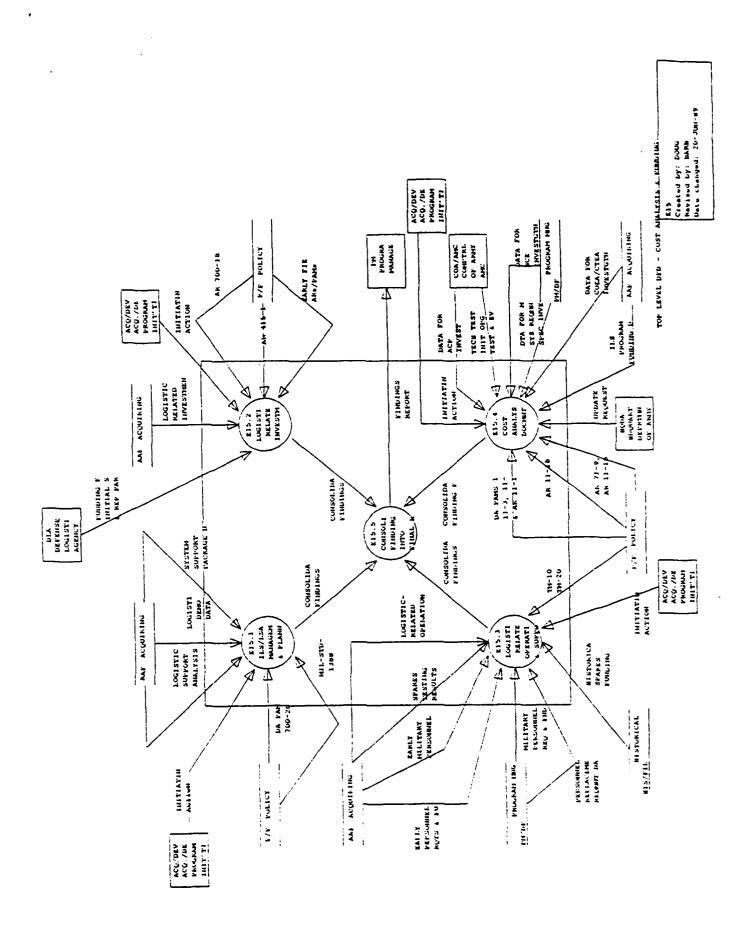


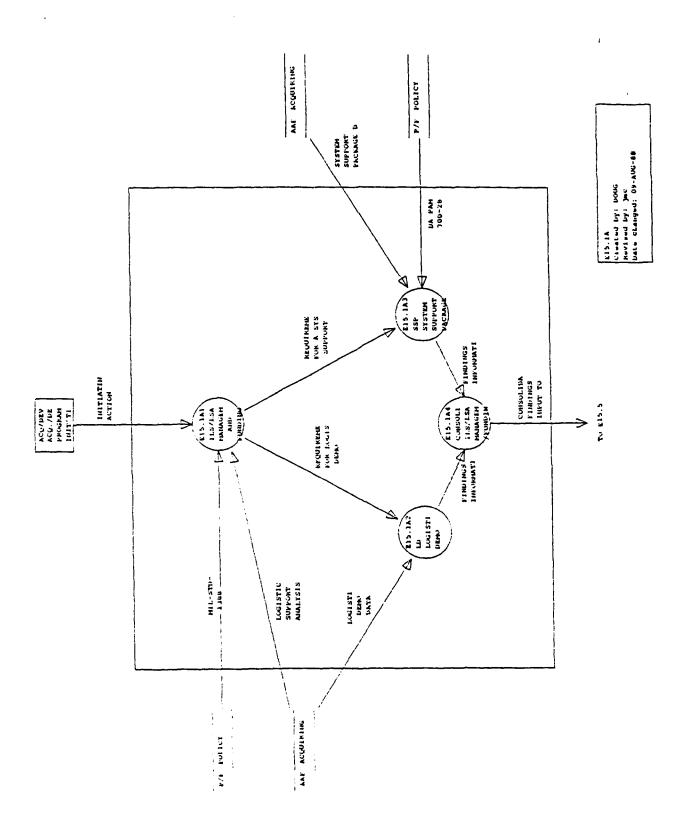
Figure 1-1. ILS Software Architecture

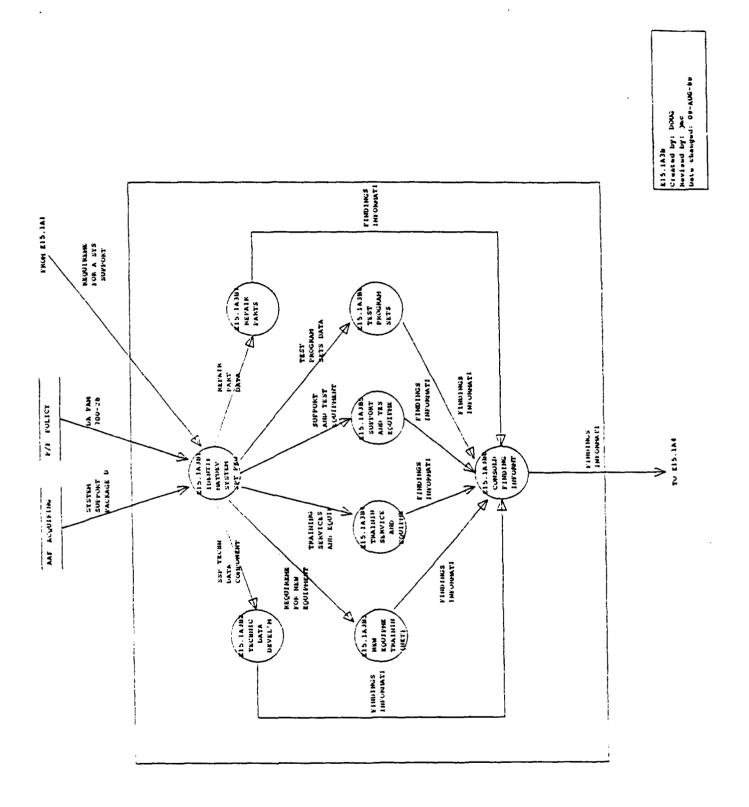
## **APPENDIX A**

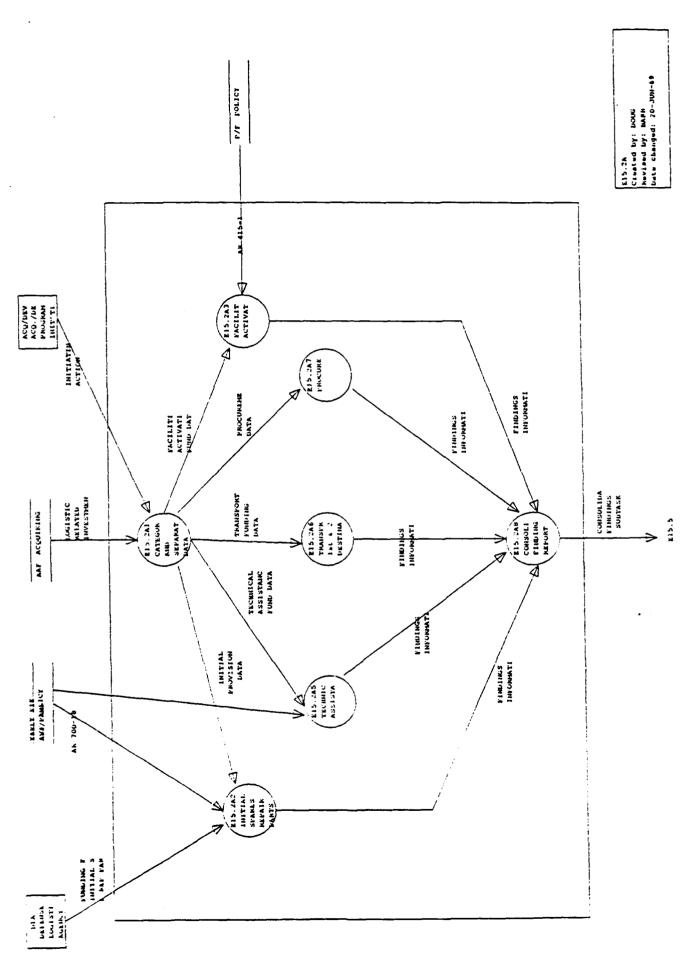
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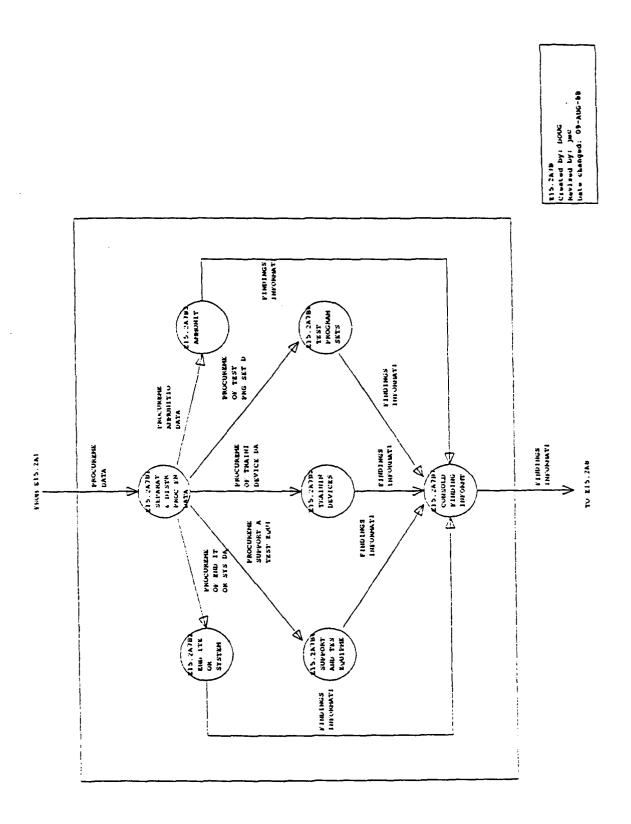
**DATA FLOW DIAGRAMS** 

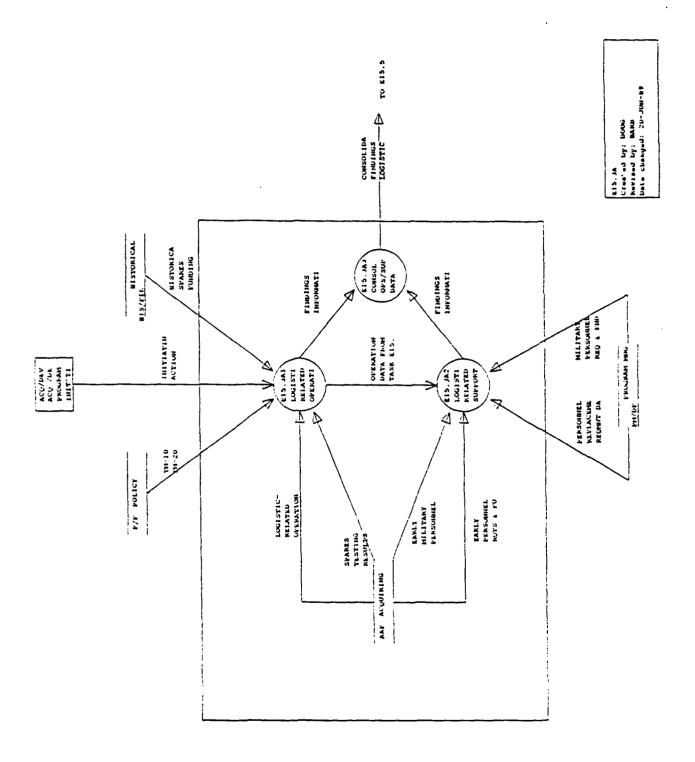


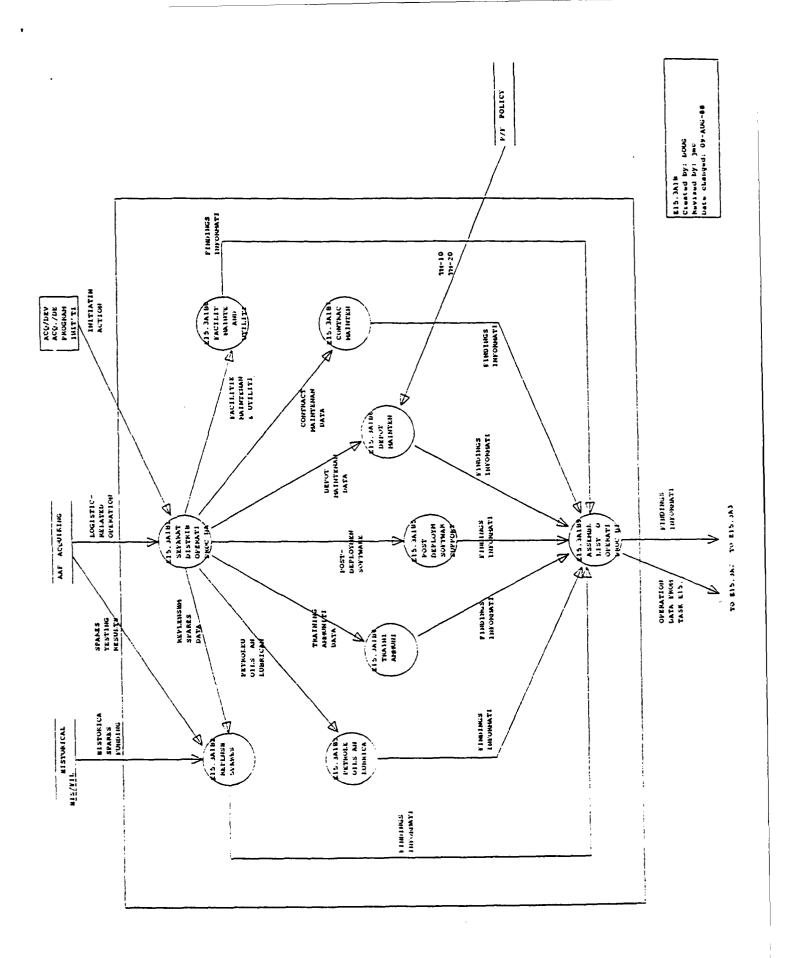


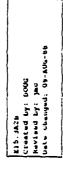


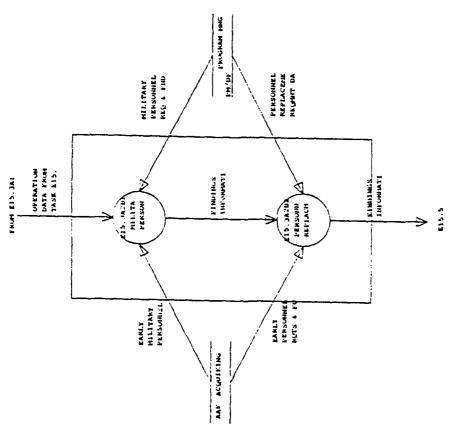


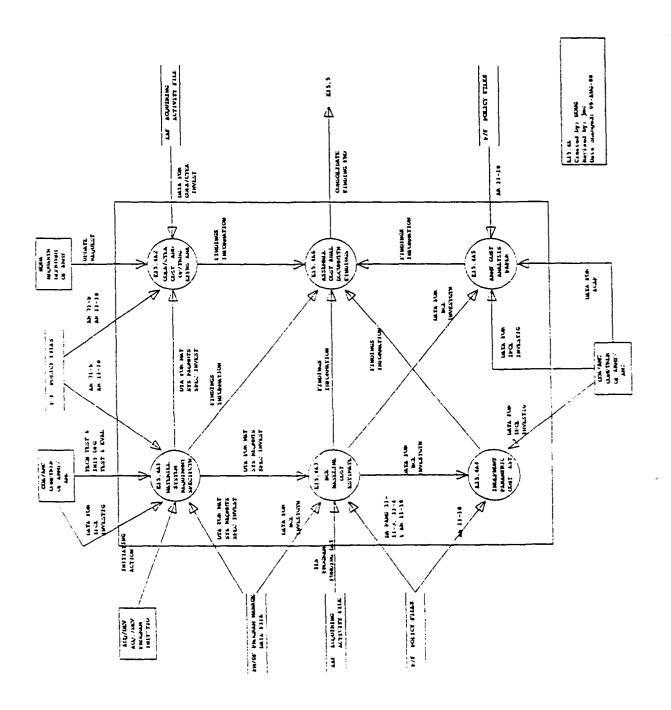












## **APPENDIX B**

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ILS ELEMENT E15
ASSESSMENT OF COST
ANALYSIS AND FUNDING

#### APJ 966-229 - E15 STRUCTURED SYSTEMS DESIGN

#### E15 - COST ANALYSIS AND FUNDING

## PROCESS E15.1A1 ILS/LSA MANAGEMENT AND FUNDING

<u>E15.1Al-1</u> During pre-concept exploration or prior to contract award, was LSA Task 101, Development of an Early Logistic Support Analysis Strategy, performed by an Army organization (see MIL-STD-1388-1A)?

#### o Yes

- Which organization performed this analysis?
- Which LSA Tasks and Subtasks were identified as being cost effective?
- Which selected tasks fit into the overall program concept?
- Determine whether the funding for the logistics program will include a tailored LSA to be performed on system-peculiar TMDE, and if not, why not.
- Determine whether adequate funding has been provided to perform LSA studies (i.e. life cycle cost analyses and trade-off studies), developing data and preparing LSA reports/CDRL items identified in the ILSP.

#### o No

- How is the LSA strategy being formulated?
- What criteria are being used to select the tasks that should be performed?

<u>E15.1A1-2</u> Have cost/labor estimates been completed for identified tasks?

- o Yes
- o No
- How and when will budgets be developed to perform this work?

<u>E15.1A1-3</u> Does the Acquisition Strategy Baseline Cost Estimate and other program document identify logistic funding requirements for the material acquisition or product improvement?

#### o Yes

- Where is this information documented?
- State whether all logistics requirements are identified.
- Identify each category/type funds that make up the funding requirement.

o No

E15.1A1-4 Have the estimated logistics funding requirements been programmed into the budget for the acquisition/improvement?

o Yes

o No

- What actions are being taken to fully fund the logistics program?
- What is the funding shortfall?

#### E15.1A1-5 Are limited LSA activities going to be performed?

o Yes

(consider and discuss the following)

- What criteria are going to be used to select these tasks?
- Which tasks have been selected using these criteria?
- What will be the impact on the system logistics support if these LSA activities are not funded?

o No

(consider and discuss the following)

- Indicate whether the funds could be used more effectively in another area of the logistics program.

E15.1A1-6 Has sufficient funding been programmed to improve the system design, based on reliability, maintainability, and testability recommendations?

- o Yes
  - How and when are these funds to be allocated?
  - Determine if this funding includes changes to documentation.
- o No
- What is the magnitude of the funding shortfall?
- What is the extent of improvement to systems design for supportability that would result from implementing the recommendations?

E15.1A1-7 Does the funding for LSA include performing Level of Repair (LOR) and Repair vs. Discard analysis to determine maintenance-significant items?

- o Yes
  - Determine with which milestones these analyses will be considered.
- o No
- How is the maintenance concept going to be developed?
- How are spare/repair parts requirements going to be identified and developed?

E15.1A1-8 Has adequate funding been programmed to allow for updates to LSA documentation based on changes in operational concepts, testing, configuration changes, and support concept changes during subsequent phases of system development?

- o Yes
  - For which areas has funding been designated?
- o No
- How will these changes be documented?

E15.1A1-9 Does LSA funding include the development of an LSAR?

#### o Yes

- State whether this funding is sufficient to cover LSAR development including maintenance for the system and all system peculiar support elements and configuration changes.
- Indicate if LSAR submission requirements have been clearly specified in contractual terms.

#### o No

- How and where are LSA tasks going to be documented?
- How will changes to logistics concepts be documented and evaluated?
- What would be the funding requirements for the LSAR?

E15.1A1-10 Has adequate funding been programmed to allow Government representatives from participating AMC MSCs and other agencies, the ability to review the LSA data?

#### o Yes

- How is the funding going to be allocated to these agencies?
- Which agencies require funding?

#### o No

- How are LSA reviews going to be funded?

E15.1A1-11 Does the funding programmed for LSA include funds to perform a provisioning analysis?

#### o Yes

- To what level (SRU, piece part, assembly, etc.) will provision documentation be prepared?

#### o No

- What funding is to be used for provisioning analysis?

- How will additional funding be obtained to perform a provisioning analysis?
- Where will provisioning results be documented?

<u>E15.1A1-12</u> Is the funding for provisioning analysis spread over the different phases of development?

- o Yes
- o No
- How are analyses going to be conducted in subsequent phases?

<u>E15.1A1-13</u> Based on results of a provisioning analysis, has adequate funding been programmed to cover initial provisioning efforts, including long lead items?

- o Yes
  - Determine whether SESAME was used to establish the provisioning requirements budget estimate.
- o No

<u>E15.1A1-14</u> Have sufficient funds been programmed so a Provisioning Guidance Conference can be held and Government personnel can attend?

- o Yes
- o No

## PROCESS E15.1A2 LOGISTICS DEMONSTRATION

- <u>E15.1A2-1</u> Has the system under development entered the FSD phase of development?
  - o Yes
  - o No
- Return to the Main Menu and reenter at E15.1A3B1.
- E15.1A2-2 Has a Logistics Demonstration (LD) plan been developed identifying the activities to be accomplished during the LD (see AR 700-127, Paragraph 3-27)?
  - o Yes
    - Determine whether funding requirements to implement the LD have been programmed.
  - o No
- How will funding levels be determined without documenting LD equipment, resources and personnel requirements?
- E15.1A2-3 Have equipment, personnel, and resources that are required to perform and monitor the LD been identified?
  - o Yes
  - o No
- E15.1A2-4 Has funding been targeted to procure a prototype system to support the LD?
  - o Yes
    - Determine whether the prototype system will adequately represent the ultimate system to be procured.
    - Indicate if the system will be available to conclude the LD 6 months prior to TT II?

- o No
- If a prototype system is not being procured, explain how the LD will be conducted?
- E15.1A2-5 Has funding been provided to support an LD on an incremental basis?
  - o Yes
  - o No
- E15.1A2-6 Has adequate funding been provided to procure new or system peculiar TMDE and/or support equipment for the LD?
  - o Yes
    - o No
- $\underline{\text{E15.1A2-7}}$  Have priorities been identified to procure the most important items first?
  - o Yes
  - o No
- E15.1A2-8 Has sufficient funding been programmed to train selected personnel to perform LD tasks?
  - o Yes
    - Which mos/civilian personnel have been selected to perform the LD?
    - Specify if the funding includes training support materiels.
  - o No
- What training is required?
- Determine if training support materials been procured.

<u>E15.1A2-9</u> Has adequate funding been identified for Government ILS functional representatives (e.g., technical publications, maintainability, MANPRINT, etc.) to participate in the LD to determine the logistics suitability of the system?

- o Yes
- o No

# PROCESS E15.1A3B1 IDENTIFY MATERIAL DEVELOPER SYSTEM SUPPORT PACKAGE REQUIREMENT

<u>E15.1A3B1-1</u> Have the required testing types and phases been identified (eg. TT I/II, EUT&E and IOT&E)?

- o Yes
- o No

<u>E15.1A3B1-2</u> Do plans exist to have SSP components in the following areas (see AR 700-127 for more detail) available for each of these tests?

- a. Technical Data
- b. Training Service and Equipment
- c. Support and Test Equipment
- d. Test Program Set
- e. Repair Parts.
- o Yes
- o No
- How is the SSP going to be evaluated?

## PROCESS E15.1A3B2 TECHNICAL DATA DEVELOPMENT

<u>E15.1A3B2-1</u> Has adequate funding been provided to obtain the systems technical data package (e.g., technical drawings Level 1,2, and 3)?

- o Yes
- o No
- How much additional funding is required to obtain the required source data?
- Indicate if this funding can be provided by another area of the program.

E15.1A3B2-2 Has funding been planned to obtain Preliminary Organizational and Unit Level Operational and Maintenance Manuals, to include RSPTLs?

- o Yes
- o No

<u>E15.1A3B-3</u> Has funding been planned to obtain a preliminary and final Maintenance Allocation Chart (MAC)?

- o Yes
- o No

<u>E15.1A3B2-4</u> Is the MAC generated as an output summary from the LSAR?

- o Yes
- o No
- Why is separate funding required?
- How can the cost of developing a MAC be minimized?
- What will drive TM/RSPTL development?

- <u>E15.1A3B2-5</u> Does the system under design utilize or contain explosive ordnance?
  - o Yes
  - o No
- Return to the Main Menu. Re-enter at E15.1A3B2-9.
- <u>E15.1A3B2-6</u> Has funding been planned to obtain/prepare explosive ordnance disposal (EOD) procedures?
  - o Yes
  - o No
- <u>E15.1A3B2-7</u> Can EOD procedures from a similar system be modified?
  - o Yes
  - o No
- <u>E15.1A3B2-8</u> Is the system under development entering Full-Scale Development?
  - o Yes
  - o No
    - Return to main menu and reenter at E15.1A3B3.
- <u>E15.1A3B2-9</u> Has funding been planned for system supply and storage documentation, such as developing ammunition/POL consumption rates, replacement and float factors, supply catalogs (SKO), load, rigging, security procedures, and packaging & preservation procedures?
  - o Yes
    - Indicate if only required documentation have been identified for development.
    - Determine and indicate if documents from similar systems be can modified so they can be used with the system under development.

- Specify whether the funding makes provisions for validation and verification of these procedural documents.
- Determine if the VAL/VER can be combined with another activity/event.

<u>E15.1A3B2-10</u> Has funding been planned to obtain draft operator, unit, IDS, and IGS maintenance manuals to support TT II and IOT&E?

#### o Yes

- Specify whether the planned funding includes verification of these manuals using target audience personnel.
- Indicate whether this activity can be combined with another to reduce funding requirements.

#### o No

- What is being done to plan for the development of these technical manuals?

<u>E15.1A3B-11</u> Has funding been planned to develop a RPSTL for organizational, IDS, and IGS maintenance and support?

## o Yes

- What funding has been included for validation/ verification efforts?
- Indicate if the LSAR has been considered as a method to limit the amount of funding required to support RPSTL preparation.

#### o No

- When is this planning going to be accomplished?
- How will TT II and IOT&E be supported?
- Comment on whether the RPSTL can be developed using LSAR output summaries, thereby limiting the amount of funding required.
- What is the magnitude of the funding shortfall?

E15.1A3B2-12 Has funding been planned for correcting maintenance concept deficiencies identified during TT I and EUT&E by updating the MAC prior to the LD and TT II/IOT&E?

o Yes

#### o No

- How will deficiencies found during TT I/EUT&E be researched and added to the MAC?
- What funding is available in the LSA/LSAR portion of the program that can be used to update the MAC?

E15.1A3B2-13 Has funding been planned to prepare calibration procedures including the required technical data?

#### o Yes

- Determine whether the funding is excessive.
- Indicate if LSA task 401 is being used.
- Ensure that maximum advantage has been taken of existing instruments at the area TMDE support team or intermediate maintenance units.
- State if the planned funding also includes evaluation of these procedures at TT II and IOT&E.
- Indicate if these procedures can be prepared more cost effectively by Government personnel.

#### o No

- Determine if a cost-effective alternative has been found.

<u>E15.1A3B2-14</u> Has funding been planned for Firing tables, EOD procedures, demilitarization procedures, and lubrication orders?

### o Yes

- Indicate if this includes evaluation plans at either TT II or IOT&E.
- State whether existing documentation can be updated or modified for the system.

## o No

- What cost effective alternatives are there?

# E15.1A3B3 NEW EQUIPMENT TRAINING

<u>E15.1A3B3-1</u> Is New Equipment Training (NET) required for the developmental item/equipment/system as outlined in AR 350-35?

- o Yes
  - What detailed training information is required (e.g., for instructor and key personnel, TT/UT personnel, command personnel, depot and facilities, test sites, etc.)?
  - Indicate if the NETP has been coordinated with the proper agencies to include funding requirements.
  - State whether funding requirements are included in the program budget.
- o No
- Return to the main menu and reenter at E15.1A3B4.
- <u>E15.1A3B3-2</u> Is funding required to correct NET deficiencies identified for operator and support personnel during TT II and IOT&E?
  - o Yes
    - Determine if any deficiencies were discovered in operator or support personnel training.
  - o No
- <u>E15.1A3B3-3</u> Have sufficient funds, equipment, and training materials been programmed to meet Depot Maintenance personnel NET requirements?
  - o Yes
    - Identify programmed resources?
    - How do these resources compare with those utilized for Depot training or similar systems?

- o No
- What is the magnitude of the funding shortfall?
- Indicate if existing resources being used on other programs can be utilized or modified.

<u>E15.1A3B3-4</u> Has funding been programmed to provide NET to Reserve component personnel?

- o Yes
  - Where are these plans documented?
- o No

<u>E15.1A3B3-5</u> Have sufficient resources been programmed to meet NET requirements of each gaining command?

- o Yes
  - How do these requirements compare with those of similar systems?
  - State whether maximum advantage has been taken of existing resources of the gaining commands.
- o No
- Determine whether existing resources being used in conjunction with other programs have been considered for use by this system.
- How can existing resources be modified, if at all?
- What options exist for meeting Training requirements?

E15.1A3B4
TRAINING SERVICES AND EQUIPMENT

<u>E15.1A3B4-1</u> Has the system passed through MDR II?

- o Yes
  - Exit to the main menu and reenter at E15.1A3B4-7
- o No

<u>E15.1A3B4-2</u> Has funding been programmed to obtain preliminary draft training materials for critical system support tasks to train TT I/EUT&E operator and support personnel?

- o Yes
- o No
- What action can be taken to minimize the funding required for these tasks?
- What is the magnitude of the funding shortfall?

E15.1A3B4-3 Have funds been programmed to train personnel with representative skills to operate and maintain the system during EUT&E?

- o Yes
- o No

<u>E15.1A3B4-4</u> Does this funding make provisions for developing early prototype training equipment and ammunition?

- o Yes
- o No
- What funding would be necessary for this?
- Where was funding for these provisions considered?
- What actions are being taken to modify existing training equipment or ammunition for this purpose?

<u>E15.1A3B4-5</u> Have funds been programmed to develop breadboard training devices for TT I/EUT&E unit and support test player personnel?

- o Yes
  - Indicate if the requirements have been justified.
  - Determine whether existing training devices can be utilized or modified.
  - How do these funding estimates compare with those of a similar system being developed?

- o No
- State whether this requirement can be fulfilled in some other manner.
- What alternatives to development of new training devices have been considered?

## E15.1A3B4-6 Has this system passed through MDR?

- o Yes
- o No
- Exit to main menu and re-enter at process E15.1A3B5.

<u>E15.1A3B4-7</u> Has funding been programmed to obtain draft training materials for institutional instructors and other training personnel who will provide personnel with representative skills to support TT II/IOT&E?

- o Yes
- o No
- What action can be taken to minimize funding for these tasks?
- What is the projected funding shortfall?
- What is the appropriate corrective action?
- What additional logistics data is available for training purposes?

<u>E15.1A3B4-8</u> Have funds been programmed so that user and maintenance personnel can be trained in the operation and maintenance of the system for TT II/IOT&E?

- o Yes
  - State whether this funding includes provisions for training instructors, equipment (including support and test equipment) and ammunition.
- o No

<u>E15.1A3B4-9</u> Were considerations made to modify existing training equipment or ammunition for the new system?

- o Yes
- o No
- What considerations were made for funding these training resource requirements?
- What actions should be taken to modify existing training equipment or ammunition for this purpose?

<u>E15.1A3B4-10</u> Have funds been programmed to provide training devices identified/developed during earlier phases of the program for institutional training or unit individual training of system operator and support personnel?

- o Yes
  - State whether all requirements associated with training device development have been fulfilled?
- o No

# E15.1A3B5 SUPPORT AND TEST EQUIPMENT

 $\underline{\text{E15.1A3B5-1}}$  Has the system under development gone through Milestone I?

- o Yes
  - Exit and re-enter at question E15.1A3B5-10.
- o No
- Explain where the system is in the development cycle.

<u>E15.1A3B5-2</u> Has funding been programmed to obtain prototype system-peculiar support and test equipment?

## o Yes

- State whether use of equipment already available in the TOA, Army inventory, or DOD inventory has been maximized.
- How does this funding compare with that needed for a similar system requiring peculiar support equipment?

## o No

- What do the preliminary results of LSA studies suggest about peculiar support and test equipment?
- What systems available within the Army or DoD are being considered for use in supporting the new system?

<u>E15.1A3B5-3</u> Has funding been allocated to obtain other support and test equipment (e.g., tool kits, jigs, fixtures, etc.)?

## - Yes

- State whether the items managers have been notified of the requirement.

## - No

- What plan exists to obtain this equipment?
- How will this effect TT I/EUT&E?

<u>E15.1A3B5-4</u> Has funding been programmed to develop new calibration equipment and calibration procedures for the new system?

#### - Yes

- In order to reduce funding requirements, state whether the capability of the area TMDE calibration and repair centers, or the area TMDE support teams was considered.

- State whether equipment from another program be utilized or modified if calibration is required.
- State if there are any impacts to the schedule for TT I/EUT&E by not having this equipment.
- Determine if costs can be reduced by taking advantage of commonality.

<u>E15.1A3B5-5</u> Does the system require a prime mover to transport the system shelter, ASIOE, crew, and power generation equipment?

## o Yes

- State whether the prime mover has been identified.
- Indicate whether initial estimates regarding the number of prime movers required have been made.
- Determine if this requirement will meet or exceed TOE and TDA authorizations.
- Ensure that these requirements have been coordinated with appropriate item managers, program managers, or other agencies.

o No

E15.1A3B5-6 Have plans been made to identify and fund material handling equipment (MHE) and mobile support facilities for Unit, DS, GS, theater, Point of embarkation, Point of debarkation and Depot which exceed current TDA/TOE authorizations?

## o Yes

- Indicate whether the same MHE or mobile support facility were considered for use at each location.
- What plans exist to resolve the requirements that meet or exceed current TDA or TOE authorization?
- State if these plans were coordinated with program managers, item managers, or other agencies.
- Determine whether the plans include initial estimates for the quantity of MHE required at each location.

- If MHE or mobile support facilities are required, when will they be identified?
- What are some cost saving alternatives to provide separate MHE for the system (e.g., sharing with other weapon systems)?

<u>E15.1A3B5-7</u> Has funding been programmed and have plans been made to procure special and common tools to support the system during TT I/EUT&E?

- o Yes
  - Determine whether existing tools within the Army or DoD inventory can be used more extensively.
  - What plans exist to resolve requirements for tools exceeding current TDA/TOE authorizations?
- o No
- What are some methods to obtain the tools in a cost-effective manner?

E15.1A3B5-8 Have funds been programmed to obtain expendable supplies and materials which are required for the crew to operate and maintain the equipment?

- o Yes
- o No

<u>E15.1A3B5-9</u> Has sufficient planning been done and funds programmed to obtain fuel, ammunition, resupply/distribution equipment and repair parts storage vans or transportation vehicles?

- o Yes
  - Determine if sufficient analysis has been performed to revise initial estimates for these types of equipment.

- If these estimates exceed TDA or TOE authorizations, explain how resolution through the appropriate processes (e.g., BOIP, data interchange, etc.) will be made and funded.
- How does the funding level required for these equipments compare with those on similar end items?
- Determine whether maximum use of equipment available in the Army/DoD inventory has been made.

## <u>E15.1A3B5-10</u> Has the system under development gone through MDRII?

- o Yes
  - Explain the location of the system in the development phase of the life cycle.
- o No
- Return to main menu and re-enter at E15.1A3B6.

<u>E15.1A3B5-11</u> Has funding been programmed for development and procurement of calibration equipment necessary to support the end item and/or TMDE?

- o Yes
  - Determine if an initial estimate of the type and quantity of calibration equipment required at unit through GS maintenance levels when the funding was programmed was included.
- o No
- How will this impact the schedule for TT II/ IOT&E or initial fielding?
- How is calibration of the system and TMDE going to be performed?

<u>E15.1A3B5-12</u> Have plans been made and funding programmed to obtain system peculiar or additional common Material Handling Equipment (MHE), shelters/trailer/vans/vehicles and prime movers?

#### o Yes

- Determine whether more extensive use of available equipment in the Army/Dod inventory could have been made.
- How were the types and quantities of these categories of equipment which are required at each maintenance level, accounted for in the funding estimates?
- What progress has been made to adjust TOE/TDA authorization for cases where estimate, types, and quantities of those categories of equipment exceed allowable limits (e.g., BOIP, interchange data, etc.)?

## o No

- How will this affect the schedule for TT II/IOT&E?
- If any of these categories of equipment were not obtained or planned for, what would be the impact on system funding requirements?
- What alternatives are being considered?

<u>E15.1A3B5-13</u> Has funding been programmed and plans prepared for obtaining, developing, and testing peculiar support equipment, TMDE, and tools required to support the system at each level of maintenance?

#### o Yes

- What actions were taken to maximize the use of items available in the Army inventory?
- If the estimated types and quantities of support and test equipment were refined through the LSA process, how do they affect programmed funding?
- What progress has been made to adjust TOE/TDA authorizations for cases where estimates for peculiar test equipment/TMDE/tools exceed allowable limit (e.g., BOIP, interchange data, etc.)?

- o No
- Determine whether alternatives have been considered which may eliminate the need for these items.
- What actions have been taken to utilize another system's equipment?

<u>E15.1A3B5-14</u> Have funds been programmed to obtain the expendable supplies and materials required to operate and maintain the system at all levels?

- o Yes
- o No

## EA15.1A3B6 TEST PROGRAM SETS

<u>E15.1A3B6-1</u> Has the system passed through Milestone II?

- o Yes
  - Exit to main menu and re-enter at question E15.3B6-8.
- o No

E15.1A3B6-2 Has a repair level analysis been performed to determine the most cost-effective maintenance levels at which to place test program sets?

- o Yes
  - Explain the results of this analysis.
  - Indicate whether funds were programmed to place the correct types and quantities of TPS at these maintenance levels.
- o No
- How can planning be done for TPS development without performing an analysis?

<u>E15.1A3B6-3</u> Has an appropriate mix of UUTs been targeted and funded for TPS development (i.e., different types of circuit cards, LRUs at different maintenance levels for TT II/IOT&E)?

- o Yes
  - Indicate if funding has been programmed to revise the TPS if the design is not frozen.
- o No
- What LRUs/SRUs can be substituted to make a better mix?

<u>E15.1A3B6-4</u> Has funding been programmed to obtain the design documentation, provisioning data, and to design the interconnection device?

- o Yes
  - How does this compare to similar LRUs/SRUs TPS funding levels from other systems?
- o No

E15.1A3B6-5 Has funding been programmed to design and develop the software, fabricate the ICD and integrate the TPS with the UUT?

- o Yes
  - How does this funding compare with similar LRUs/SRUs?
  - What alternatives can be taken to reduce cost?
- o No

E15.1A3B6-6 Has the system passed through MDR II?

- o Yes
  - Explain which TPS were prepared during the last development phase and the test results.
- o No
- Exit to main menu and re-enter at E15.1A3B7.

<u>E15.1A3B6-7</u> Based on the results of the Repair Level Analysis, has funding been programmed to develop the remaining TPS?

### o Yes

- Indicate if funding levels are consistent with similar LRUs/SRUs developed during the last program phase.
- Determine if a creative procurement strategy is to be used to reduce the costs.

## o No

- How is this going to effect the logistic support of the system?
- What will be the effect on fielding the system?
- State if alternative plans have been made to support the system.

<u>E15.1A3B6-8</u> Has funding been programmed to produce and field the TPS developed during FSD?

#### o Yes

- Indicate if fielding of the TPS will be concurrent with the system.
- Determine if any TPS modifications due to changes resulting from TT II/IOT&E have been funded.
- Explain how type and quantity requirements have been refined to reduce the investment, if at all.

## o No

- What alternative means have been developed to support the system?
- What would be the impact to the logistic support if TPS were not obtained?

<u>E15.1A3B6-9</u> Has funding been programmed for post deployment software support and maintenance?

## o Yes

- Determine if funding levels are adequate to support the TPS over its lifetime.

- What is the plan for supporting the TPSs after deployment?

## E15.1A3B7 REPAIR PARTS

## <u>E15.1A3B7-1</u> Has the system under consideration passed through Milestone I?

- o Yes
  - Exit to main menu and re-enter at question E15.1A3B7-5.
- o No
- Explain what spare parts planning has been accomplished.

E15.1A3B7-2 Using LSA results and provisioning requirements, has funding been programmed to obtain spare/repair parts for TT I/EUT&E?

- o Yes
  - How does this funding level compare to expenditures for similar equipments?
  - Determine whether the test plans require spare/repair parts to be on hand for all maintenance actions being tested.

o No

## E15.1A3B7-3 Has the system passed through MDRI?

- o Yes
  - Explain what spare parts planning took place during the subsequent developing phase.
- o No
- Exit to main menu and re-enter at E15.1A3B8.

<u>E15.1A3B7-4</u> Using LSA and provisioning requirements, has adequate funding been programmed to obtain supply support (spare/repair parts) consumable, and BII for TT II/IOT&E?

#### o Yes

- How do these funding levels compare to expenditures made on similar systems?
- Determine if the test plans require spare/repair parts, consumable and BII to be on-hand for all maintenance actions being tested.

o No

E15.1A3B8
CONSOLIDATE FINDINGS AND INFORMATION

E15.1A3B8-1 Review Process E15.1A3B1 - E15.1A3B7:

For systems entering TT I/EUT&E or TT II/IOT&E:

What areas of the system support package have been adequately planned and funded?

Consolidate these findings and briefly describe the funding that exists for each activity and the schedule for performing the activity.

Identify areas where a sample is going to be tested and explain how the results will be utilized to update or verify initial planning.

Identify areas of the system support package that are inadequately funded and therefore deficient in meeting testing requirements.

Explain the deficiencies, funding required and the actions being taken to rectify them.

How will shortcomings in the SSP affect testing and the future logistics support of the system?

Where applicable, prepare a comparison of funding allocated for this system to funding expended on similar systems.

Comment on achieved cost savings or additional benefits attained by additional expenditures.

# E15.1A4 CONSOLIDATE ILS/LSA MANAGEMENT/FUNDING FINDINGS

Review findings from Process E15.1A1 - E15.1A3.

Explain how good ILS/LSA planning with relevant funding has led to the development of a supportable system.

Show how such planning and funding led to the decisions for selection of the SSP.

Show how planning and funding for the LD accomplished the objects stated in AR 700-27.

What were the successes and failures in planning and funding for the logistics support of the system?

How were failures overcome?

Explain how deficiencies in planning/funding or poor management led to deficiencies in the logistics support of the system.

What was done to correct these deficiencies?

Include any other noteworthy events or activities that should be included in the final report.

# E15.2A1 CATEGORIZE AND SEPARATE DATA (PRODUCTION)

<u>E15.2A1</u> During the production phase of a program, the following logistic-related investments must be made in order to prepare to field the new system. Have logistics support requirements been separated in the following areas for processing (See DA PAM 700-28, Section XIV, paragraph 4-51 for information)?

## o Yes

- Initial Spares and Repair Parts.
- Facilitate Activation includes maintenance, storage, family housing, warehousing, operational, etc.
- Special Support Services identified in material fielding plan.
- Technical Assistance include contractor field service engineers or civilian personnel.
- Transportation moving equipment to a CONUS Depot or other point of Government acceptance for both new and displaced systems.
- Procurement includes end items, ammunition, support and test equipment, training devices, TPS.

## E15.2A2 INITIAL SPARES AND REPAIR PARTS

E15.2A2-1 Has adequate funding been programmed, with sufficient lead time, to procure ammunition?

## o Yes

- Determine whether ammunition funding requirements have been refined due to TII/IOT&E results.
- Indicate if this funding includes Basic load requirements for units designated by gaining MACOMs; stockage at the DS-Level Ammunition Supply Point; at the Corps storage areas; and at Theater war reserves.
- How do these funding levels compare with a system having the same density in the field?

- What is the impact to fielding the new system and transferring the displaced system?

E15.2A2-2 Has adequate funding been programmed to obtain an initial lay-in of spare and repair parts to support PLL and ASL stockage levels, IGS repair part stockage requirements; theater level war reserves; and POMCUS stockage requirements?

## o Yes

- Indicate if stockage requirements at all locations have been adjusted for TTII/IOT&E results.
- What modeling was used to determine appropriate stockage levels?
- How were modeling results utilized in the development of funding profiles?
- Determine if order shiptimes and system readiness objectives were used to determine stockage levels consistent with AR 700-18 and the policy for material fielding.
- State whether the procurement schedule for DS-Level repair parts is consistent with the system deployment plan.
- Determine whether range and quantity requirements for DS and GS repairable exchange items have been included in the funding estimates.
- What would be the impact on system readiness levels if spare/repair parts were not procured above certain stockage levels?

## o No

- What interim measures are being taken to support repairs to the system?
- What impact will this have on fielding the system and transferring the replaced system?
- What alternatives are being considered in lieu of spare parts procurement?

E15.2A2-3 For any system displaced by the introduction of a new system, were plans been made to fund the procurement and/or transfer of repair parts identified the PLL, ASL and GS by the appropriate gaining support units within the established transfer date?

o Yes

o No

## E15.2A3 FACILITY ACTIVATION

<u>E15.2A3-1</u> Do the results of TT II and IOT & E support the need for programmed base operations, service support, and logistical facility requirements?

o Yes

o No

<u>E15.2A3-2</u> Has funding been budgeted for the following facilities (if required to support introduction of the new system): A system operations center; aviation; administrative and headquarters; troop barracks; dining; and military housing?

- o Yes
  - State whether construction will be completed prior to deployment and within operational guidelines.
  - Indicate if appropriate documentation was submitted to COE IAW AR 415-15.

o No

NOTE: (Where applicable, the following questions apply to both new and displaced systems.)

E15.2A3-3 Has funding been programmed for new or modified unit, DS, GS, and depot maintenance facilities?

## o Yes

- State if these facilities will be available to meet the operational need date.
- Determine whether appropriate documentation was submitted to COE IAW AR 415-15.
- How does funding levels compare with similar system that have been developed?

o No

E15.2A3-4 Has funding been programmed for construction of or modification to organizational storage facilities for: PLL, Arms, and basic load (ammunition and POL)?

## o Yes

- Indicate if plans for these facilities were approved by the appropriate Army/DOD organization.
- State whether these facilities will be available by the operational need date.

### o No

- Determine if any of these requirements can be combined.
- Indicate if excess capacity in other facilities can be utilized and shared.
- State if it is possible to make minor modification to existing facilities to accommodate these new requirements.

E15.2A3-5 Has funding been programmed for construction of or major modification to DS storage facilities for ammunition, ASL and ORF?

#### o Yes

- State whether plans for these facilities were approved by the appropriate Army/DOD/NATO organization.
- Determine if these facilities will be available by the operational need date.

- Indicate if any of these requirements can be combined.
- Determine if excess capacity in other facilities can be shared.

E15.2A3-6 Has funding been programmed for construction or major modification of/to GS/theater storage facilities for war reserves, POMCUS, and selected non-war reserves including ammunition.

## o Yes

- State whether plans for these facilities were approved by the appropriate Army/DOD/NATO organizations.
- Determine if the facilities will be available by the operational need date.

## o No

- Indicate if any of the facilities can be combined.
- What actions have been taken to make minor modification to existing facilities to accommodate these new requirements?

E15.2A3-7 Have funds been programmed for construction of or modifications to depot facilities for war reserve ammunition, and RCF?

## o Yes

- State whether plans for these facilities were approved by the appropriate Army/DOD/Nato activity.
- Determine if the facilities will be available prior to the operational need date.

## o No

- Indicate if any of the facilities can be combined.
- What actions have been taken to make minor modifications to existing facilities to accommodate these new requirements?

E15.2A3-8 Has funding been programmed to either construct or procure training ranges, buildings, classrooms, and training equipment/devices?

## o Yes

- How do these funding level compare with similar systems that have already been developed?
- Indicate if appropriate documentation has been submitted to the COE IAW AR 415-15.

#### o No

- Determine if any of these training requirements can be fulfilled by utilizing existing facilities or equipment.

## E15.2A5 TECHNICAL ASSISTANCE

E15.2A5-1 Have funds been programmed to provide technical assistance to the gaining command for initial fielding and post deployment?

## o Yes

- What types of technical assistance are required?
- Who will provide technical assistance?
- For what time period?
- Determine if contractual arrangements were made.

## o No

E15.2A5-2 If field service engineers (FSE) are going to be supporting the gaining command, have sufficient funds been identified to allow FSE support for the specified time period?

#### o Yes

- When is the transition to organic support planned?
- What activities is the FSE going to perform?
- What type of maintenance reporting is required?
- Indicate if tools and test equipment are in place for the FSE to perform maintenance and repair tasks.

- o No
- <u>E15.2A5-3</u> Has funding been provided for a contractor training team to provide NET to the gaining command?
  - o Yes
    - When will NET be provided by Army personnel?
  - o No
- E15.2A5-4 Has funding been established for contractor personnel to perform supply support services?
  - o Yes
    - How long will contractor personnel perform these service?
    - What type of material usage reporting is required?
  - o No

E15.2A6
TRANSPORTATION: 1st and 2nd DESTINATION

- <u>E15.2A6-1</u> Have funds been programmed to transport the new system to a CONUS depot or other point of government acceptance?
  - o Yes
    - Where have transportation provisions been specified?
    - Indicate if the funding is adequate to transport all systems produced.
  - o No

<u>E15.2A6-2</u> Does this funding include, training of personnel responsible for handling, storage, inspection, etc. once the new system reaches the CONUS depot or other government point of acceptance?

- o Yes
  - What arrangements have been made to utilize personnel and procedures developed for existing systems?
- o No

E15.2A6-3 Have sufficient funds been allocated to transport the new system from the CONUS depot or point of government acceptance to the gaining command IAW the BOIP and MFP?

- o Yes
  - Determine if the funding levels adequately reflect the final density and distribution of the system.
  - Indicate if plans have been made to disburse the funding IAW the distribution schedule.
- o No

E15.2A6-4 Has funding been programmed to transport the displaced system to new using units and to a CONUS depot for refurbishing, if appropriate?

- o Yes
  - Determine if the funding will allow for concurrent delivery of the new system and removal of the displaced system.
  - Indicate if the funding levels are sufficient for transporting all the displaced system currently in the field.
- o No

# E15.2A7B1 SEPARATE AND DISTRIBUTION PROCUREMENT FUNDING DATA

15.2A7B1-1 Have system operational and maintenance support fielding requirements been separated into the following categories:

End item/system, ammunition, support/test equipment, training device, and test program sets?

## E15.2A7B2 END ITEM OR SYSTEM

<u>E15.2A7B2-1</u> Has adequate funding been programmed to obtain unit equipment and data to be used in conjunction with each end item fielded? (Unit equipment includes supply support vans, ammunition, packaging, handling and storage, tools, test equipment, on-board spares and technical manuals.)

- o Yes
- o No

<u>E15.2A7B2-2</u> Has funding been programmed to procure training equipment for the system or end item operators and maintainers?

- o Yes
  - State whether the funding levels reflect the finalized distribution plan.
- o No

<u>E15.2A7B2-3</u> Is the funding sufficient to procure enough unit training equipment and materials to satisfy resident operator training requirements both initial and sustainment?

- o Yes
- o No

<u>E15.2A7B2-4</u> Is the funding sufficient to procure training equipment, support and test equipment, and related computer resource support equipment for initial and sustainment institutional training of system support personnel?

- o Yes
- o No

<u>E15.2A7B2-5</u> Has sufficient funding been provided to procure end items or repair parts to satisfy the operational readiness float requirements developed for the end item at the DS level?

- o Yes
- o No

<u>E15.2A7B2-6</u> Has sufficient funding been programmed to procure war reserves to satisfy requirements for: Bulk POL (class III), ammunition (class V), end items/specified support test equipment (class VII) and repair parts (class IX)?

- o Yes
  - State whether parts used on other systems have been taken into account.
- o No

<u>E15.2A7B2-7</u> Have sufficient funds been programmed to procure ancillary operational equipment (power generation, environmental control, communication, prime mover, winterization kits, installation kits, safety equipment, etc.) if the current requirements exceed TOE/TDA authorizations of gaining units?

- o Yes
  - Determine if requirements have been modified based on TTII/IOT&E results.
- o No

## E15.2A7B3 AMMUNITION

- <u>E15.2A7B3-1</u> Have funds been programmed to meet the unit basic load requirement for each unit designated to receive the system?
  - o Yes
  - o No
- <u>E15.2A7B3-2</u> For the displaced system, have funds been programmed to procure ammunition for receiving units not currently authorized and/or transfer this type of ammunition?
  - o Yes
    - Indicate if the plans are compatible with the transfer date.
  - o No
- <u>E15.2A7B3-3</u> Has sufficient funding been programmed to stock ammunition at the DS ammunition supply point and at the GS/Corps storage area IAW the system deployment plan?
  - o Yes
  - o No
- E15.2A7B3-4 Have sufficient funds been programmed to meet ammunition theater war reserve and CONUS war reserve stockage requirements IAW AR 11-11, AR 710-8, and AR 710-1?
  - o Yes
    - State whether these requirements have been approved by ODCSOPS.
  - o No
- Determine whether these requirements can be combined with a similar system utilizing the same ammunition.

<u>E15.2A7B3-5</u> Were funds programmed and authorized during milestone II to procure long lead items?

- o Yes
- o No

## E15.2A7B4 SUPPORT AND TEST EQUIPMENT

<u>E15.2A7B4-1</u> Have funds been programmed to procure ammunition resupply vehicles, repair parts storage vans and transport vehicles, and material handling equipment in cases where the type and quantity requirements are in excess of current TOE/TDA authorizations?

- o Yes
- o No
- What actions have been taken to utilize existing equipment or combine the requirement with other systems?
- What will be the impact on system fielding if the shortfall is not resolved?

<u>E15.2A7B4-2</u> Have funds been programmed to assess the impact of design changes on the proposed system support and test equipment at all levels of maintenance?

- o Yes
  - What plans exist to modify support and test equipment based on system design changes?
- o No

<u>E15.2A7B4-3</u> Have funds been programmed to procure the items which are used to maintain the system peculiar support equipment (e.g. TMDE, calibration equipment etc.) specified for maintenance support of the end item?

- o Yes
- o No

<u>E15.2A7B4-4</u> Have funds been programmed to procure operator/crew tools, unit, DS, and GS (or AVUM and AVIM) tools, TMDE, and calibration equipment that are in excess of current type/quantity TOE/TDA authorization requirements?

## o Yes

- State whether the requirements are consistent with the system maintenance concept and results of LD, TTII, & IOT&E.
- Indicate if USACTA has concurred in the request to procure unit, DS, and GS TMDE.
- State whether a final determination has been made as to the type of calibration facilities required.

## o No

- Determine if tool, TMDE, and calibration equipment from existing systems can be modified in order to be used with the new system.

<u>E15.2A7B4-5</u> For displaced systems, have funds been programmed to procure or transfer existing operator/crew tools, unit, DS, and GS tools, TMDE, and calibration equipment to the receiving unit?

- o Yes
- o No

<u>E15.2A7B4-6</u> Have funds been programmed for procurement and distribution of depot level tools, TMDE and DMPE to support the new system?

## o Yes

- Indicate if these requirements are consistent with the scheduled pilot overhaul and intended initiation of organic depot capability.
- State whether TPS requirements have been considered.

#### o No

- Determine if installation and checkouts performance and scheduling have been considered.

# E15.2A7B5 TRAINING DEVICES

<u>E15.2A7B5-1</u> Have sufficient funds been programmed to procure operator and support personnel training devices in the quantities identified in the distribution plan for initial and sustainment training?

### o Yes

- State whether the results of TTII and IOT&E indicate that the operator training devices meet established performance requirements.
- Determine whether provisions have been made to support the institutional training devices.

## o No

- State if TTII/IOT&E results indicate that training requirements can be met with existing equipment or through other training methods.

<u>E15.2A7B5-2</u> Were funds programmed during milestone II for Long Lead procurement of initial and sustainment training devices?

#### o Yes

- Determine if approval was granted by DA.
- When will this equipment be available?

- o No
- What plans exist to fulfill training requirements prior to arrival of training devices?
- How will these devices be maintained?

<u>E15.2A7B5-3</u> Have sufficient funds been programmed for training institutional instructors who will provide school house instruction to system operator and support MOS personnel?

- o Yes
- o No
- How will IOC be effected by these events?

<u>E15.2A7B5-4</u> Have funds for Depot Maintenance personnel training requirements been programmed?

- o Yes
  - State whether the funding makes provision for the required mix of skill level employees to support the new/modified system.
  - Indicate if the funding includes training of depot instructors.
- o No
- How will the lack of funding for training depot personnel impact the anticipated organic support date?

<u>E15.2A7B5-5</u> Have funds been programmed for validation for prototype training devices prior to IOT&E?

- o Yes
  - What TT I/EUT&E results were obtained on the effect of the breadboard training devices?
- o No
- Indicate if this requirement can be fulfilled in a more cost-effective manner.

## E15.2A7B6 TEST PROGRAM SETS

<u>E15.2A7B6-1</u> Has funding been programmed to develop and procure TPS that were not developed during the FSD phase?

- o Yes
  - Indicate if the recommended TPS are based on LORA & TTII/IOT&E results.
- o No
- How will maintenance be performed on those UUTs that require a TPS for testing?

<u>E15.2A7B6-2</u> Did the results of TTII and IOT&E confirm the cost effectiveness of the representative sample of TPS?

- o Yes
- o No

E15.2A7B6-3 Have funds been programmed to correct deficiencies in the TPS and ICD design discovered during TTII/IOT&E and to verify the corrective action?

- o Yes
  - How does funding allocated for corrective action compare to funding required for initial TPS development?
  - How will the redesign activities be verified?
- o No
- What plan exists to support the system if TPS deficiencies are not going to be corrected?

<u>E15.2A786-4</u> Has funding been programmed to correct deficiencies in TPS documentation and improve SOWs for TPSs that are being procured?

- o Yes
  - How will corrections be verified?

- o No
- How will PDSS be performed on these TPSs?

E15.2A7B6-5 Has funding been programmed to correct and verify changes to Operations and Maintenance instructions required to utilize the TPS, and install and maintain the ICD?

- o Yes
- o No

E15.2A7B6-6 Has sufficient funding been programmed to procure and distribute TPS (load modules, ICDs, & documentation) to the gaining units IAW the MFP?

- o Yes
- o No
- What workaround have been developed, so the end item can be maintained?

<u>E15.2A7B6-7</u> Were funds programmed with enough lead time to procure Long Lead items needed to support the ICD of the TPSs?

- o Yes
- o No

E15.2A7B6-8 Has sufficient funding been programmed to procure enough TPSs to provide operator and maintainer initial and sustainment training?

- o Yes
- o No

# E15.2A7B7 CONSOLIDATE FINDINGS AND INFORMATION

<u>E15.2A7B7-1</u> Review Processes E15.2A7B2 - E15.2A7B6 for systems that have entered milestone III and consider:

- Based on your assessment of the processes, explain how the procurement actions taken will result in an operational system that is maintainable and meets the IOC date.
- Consolidate these finding and briefly explain the funding that exists to obtain the items required for each process and the schedule for procuring them.
- Identify areas within each process where procurement shortfalls exists and the reasons why (e.g. insufficient funding, deferred requirement, unidentified requirement etc.).
- What impact will those shortfalls have on supporting the system?
- Estimate the cost associated with these deficiencies such as the need for additional spare parts, contractor maintenance, lack of trained troops, low state of readiness etc.
- How will these shortcomings effect system fielding?

# E15.2A8 CONSOLIDATE FINDINGS REPORT

<u>E15.2A8-1</u> Review funding from processes E15.2A1 - E15.2A7 and comment as follows.

- Explain how the Logistic Support required to field the system will be provided through the Logistic related investment for the areas identified below:
  - 1. Initial Spares and Repair Parts
  - 2. Facility Activation
  - 3. Technical Assistance
  - 4. Transportation
  - 5. Procurement
- Explain what funding shortfalls exist and how these shortfalls will be overcome.
- Explain the impact on funding or planning shortfalls on the system IOC date.
- Explain how deficiencies in planning, funding or poor management caused the shortfalls to develop.
- Include any other noteworthy events or activities that should be included in the final report.

# E15.3A1B1 SEPARATE AND DISTRIBUTE OPERATION PROCUREMENT DATA

E15.3A1B1 During the production and deployment phase of a program the following Logistics Related Operation items must be procured to sustain the item in the field. Have recurring logistic support requirements been separated into the following areas for processing:

- 1. Replenishment Spares
- 2. Petroleum, Oils and Lubricant
- 3. Training Ammunition

- 4. Post Deployment Software Support
- 5. Depot Maintenance
- 6. Contract Maintenance
- 7. Facilities Maintenance and Utilities
- o Yes
- o No

# E15.3A1B2 REPLENISHMENT SPARES

<u>E15.3A1B2-1</u> Was funding programmed to procure replenishment spares for the organization level PLL's, DS level ASL's, GS, theater/POMCUS, and Depot level repair parts?

- o Yes
- o No
- What plans have been made to accommodate "out of stock" conditions?
- What impact will this have on the system maintenance concept?

E15.3A1B2-2 Have the results of LSA, TTII and IOT&E been used to update the replenishment spares required based on changes to reliability data?

- o Yes
  - Assess the funding impacts resulting from changes to replenishment spares requirements.
- o No

<u>E15.3A1B2-3</u> Have funds been programmed to procure replenishment spares for displaced systems?

- o Yes
  - How was historical data used to determine funding requirements?

- o No
- How will this impact fielding of the new system?
- What impact will lack of funding for replenishment parts have on the command receiving the displaced system?
- How can historical data be used to determine funding requirements?

# E15.3A1B3 PETROLEUM, OIL, AND LUBRICANTS

<u>E15.3A1B3-1</u> Has adequate funding been programmed, with sufficient lead time to procure petroleum, oils, and lubricants to support system requirements at organizational, DS, GS and theater levels?

- o Yes
  - How do funding levels for POL compare with expenditures for a similar system that has already been fielded?
- o No

<u>E15.3A1B3-2</u> How have TTII/IOT&E results impacted the required funding for POL?

- o Yes
- o No

E15.3A1B3-3 Are PCL procurement schedules consistent with the system deployment plan for activation of organizational through GS maintenance capabilities?

- o Yes
- o No

<u>E15.3A1B3-4</u> Have funds been programmed to procure bulk POL resupply vehicles and distribution/storage equipment for gaining system support units where the types and quantities required are in excess of current TDA/TOE authorizations?

- o Yes
  - How have these requirements been adjusted based on the results of TTII/IOT&E?
- o No

<u>E15.3A1B3-5</u> Has adequate funding been programmed to procure bulk and packaged POL, POL resupply vehicles, and POL distribution/storage equipment in the types and quantities identified in the training plan to satisfy resident operator and maintainer initial and sustainment training requirements?

- o Yes
  - Indicate if the adequacy of utilizing these training materials/equipment was determined during TTII/IOT&E?
- o No
- How will training for POL distribution/handling and the use of POL resupply vehicles be conducted?

<u>E15.3A1B3-6</u> Has adequate funding been programmed to meet POL war reserve requirements?

- o Yes
- o No

<u>E15.3A1B3-7</u> For the FUE timeframe, have funds been programmed to procure the necessary range and quantity of packaged POL and the necessary bulk POL to support the system at organizational, DS, and GS maintenance levels?

- o Yes
- o No

### E15.3A1B4 TRAINING AMMUNITION

<u>E15.3A1B4-1</u> For operator training, have sufficient funds been provided to procure training ammunition for all sites identified in the system training plan?

- o Yes
- o No

<u>E15.3AlB4-2</u> For each new training round, did the results of TTII and IOT&E indicate the round is acceptable for the mission intended?

- o Yes
- o No
- Indicate if procurement funding was eliminated for those training rounds found not to be adequate.

<u>E15.3A1B4-3</u> During the FUE timeframe, has sufficient funding for ammunition been programmed to support initial and sustainment system operator institutional training?

- o Yes
- o No
- How will operator training be provided?

# E15.3A1B5 POST DEPLOYMENT SOFTWARE SUPPORT

<u>E15.3A1B5-1</u> Have the PDSS requirements been analyzed to determine that the host system equipment available at the proposed PDSS center is adequate to maintain the computer software?

- o Yes
  - What were the results?
  - What impact do these results have on PDSS funding requirements?
- o No

E15.3A1B5-2 Can another government or MSC facility that has the required equipment be selected as the PDSS center to maintain the computer software?

- o Yes
  - How does this selection impact PDSS funding requirements?
- o No
- Exit to main menu and re-enter at E15.3A1B5-3.

<u>E15.3A1B5-3</u> Has funding been programmed to procure the necessary host system equipment and technical data to perform post deployment software support at the selected center?

- o Yes
  - How does the funding level for PDSS compare with similar systems already fielded?
- o No
- What alternative methods of providing PDSS have been considered?

<u>E15.3AlB5-4</u> Does the funding include personnel and training requirements at the PDSS center to meet the desired support transition milestones?

- o Yes
- o No

<u>E15.3A1B5-5</u> Have adequate funds been programmed to incorporate and verify changes to the system software and documentation resulting from TTII and IOT&E prior to fielding?

- o Yes
  - State whether a warranty from the contractor can be used as a vehicle for making these changes.
- o No
- Indicate who will perform PDSS and at what cost, if these correction are not made.

<u>E15.3A1B5-6</u> Have funds been programmed to develop and verify prior to fielding the remaining software documentation not provided at TTII/IOT&E?

- o Yes
  - How do these funding levels compare with the cost to procure the software documentation for TTII/IOT&E?
- o No

<u>E15.3A1B5-7</u> For FUE, have adequate funds been provided for workarounds associated with lack of equipment, personnel or software documentation?

- o Yes
  - When will adequate equipment, personnel or software documentation be available?
  - How does this funding level compare with expenditures required to obtain the required equipment, personnel, or software documentation?

o No

<u>E15.3A1B5-8</u> Has adequate funding been provide to sustain the PDSS center over the life of the system?

- o Yes
  - What types of activities will this sustainment funding cover?
- o No

<u>E15.3AlB5-9</u> Have funds been programmed to support changes to the PDSS equipment, personnel, and documentation resulting from system design changes or ECPs?

- o Yes
- o No
- How will system design changes be handled at the PDSS center?
- State whether government personnel can perform the analysis and implement the required changes.

# E15.3A1B6 DEPOT MAINTENANCE

<u>E15.3A1B6-1</u> Have funds been programmed to meet manpower needs based on projected organic depot workload requirements?

- o Yes
- o No

<u>E15.3A1B6-2</u> Have funds been programmed to provide depot personnel the skills necessary to maintain the new system?

- o Yes
  - Where are these skills identified?
  - How will these skills be provided to depot personnel?
- o No

E15.3AlB6-3 Has funding been programmed to purchase material
(SRUs, assemblies, Sub-assemblies, Components, etc.) to support
first year organic repair activity?

o Yes

o No

- What workarounds are being pursued?
- Indicate if contractor depot level maintenance has been considered.

<u>E15.3AlB6-4</u> Have funds to transport the failed system from the field to the depot and back to the field been programmed?

- · o Yes
  - o No

 $\underline{\text{E15.3A1B6-5}}$  For the displaced system, has funding been programmed to refurbish the system to a level specified by AR 750-1 and AR 700-142 to accomplish equipment transfer to the gaining command?

- o Yes
- o No

<u>E15.3A1B6-6</u> Have funds been programmed to procure any additional tools, TMDE, and/or test equipment?

- o Yes
- o No

### E15.3A1B7 CONTRACTOR MAINTENANCE

<u>E15.3A1B7-1</u> Have funds been programmed to obtain labor and materiel from the contractor to support a specified number of returns over a given time period?

- o Yes
  - What is the level of funding?
- o No

<u>E15.3A1B7-2</u> Do the provisions include a specified turn-around time and a warranty for work performed?

- o Yes
- o No

<u>E15.3A1B7-3</u> Explain the method that has been establish for government acceptance of the repair?

- Explain

E15.3A1B7-4 How will the contractor charge the government for the repairs (e.g. actual costs incurred, Firm Fixed Price Proposal, negotiated labor rates, etc.)?

- o Yes
- o No

<u>E15.3A1B7-5</u> Will materiel be provided through MILSTRIP procedures, or by providing funds to the contractor to purchase a materiel inventory, or for the contractor to purchase materiel as required and pass the costs through to the government.

- Explain

<u>E15.3A1B7-6</u> What are the government obligation under the contractor repair agreement?

- o Yes
- o No

<u>E15.3A1B7-7</u> Have funds been programmed to cover the transportation costs of sending a fielded system to/from the field, to/from the contractor maintenance facility?

- o Yes
- o No
- What workarounds are being explored?

<u>E15.3A1B7-8</u> Have funds been programmed for contractor supply support at unit/DS and/or GS maintenance sites?

- o Yes
  - Which levels?
- o No

E15.3A1B7-9 Have funds been programmed for Interim Contractor support at DS/GS maintenance locations?

- o Yes
  - What are the terms of these agreements and its duration?
  - How will the contractor charge for this maintenance services?
  - Who is responsible for providing materials and test equipment to support these repairs?
- o No
- Determine if the organic support capability will be in place at FUED.

# E15.3A1B8 FACILITIES MAINTENANCE AND UTILITIES

E15.3A1B8-1 Have sufficient funds been programmed for yearly maintenance and utility costs associated with new or modified facilities such as systems operations center, aviation facilities, administrational headquarters, troop barrack, maintenance (both new and displaced systems) and supply support facilities required by the introduction of the new system?

o Yes

o No

# E15.3A1B9 ASSEMBLE LIST OF OPERATIONAL PROCUREMENT DISCREPANCIES

E15.3A1B9-1 Review processes E15.3A1B1 - E15.3A1B8 and comment on them considering the following:

- What areas required to meet FUE objectives have been adequately planned and funded?
- Consolidate these finding and briefly describe the funding that exists for each procurement activity and the schedule for completing the activity?
- Identify scheduling problems and their impact on FUE.
- Identify procurement deficiencies which effect the system operation scenario.
- Explain these deficiencies and the actions being taken to resolve them.
- How will these shortcomings impact the FUE milestone?
- Finally, where applicable, prepare a comparison of funding allocated for this system to funding expended on similar systems. Comment on any achieved cost saving or benefits gained by additional expenditures.

# E15.3A2B1 MILITARY PERSONNEL

<u>E15.3A2B1-1</u> Has sufficient funding been programmed to meet system crew and maintenance manpower requirements that were programmed into the Army personnel recruiting and training system?

- o Yes
- o No

<u>E15.3A2B1-2</u> Can an acceptable level of readiness be achieved with available manpower?

- o Yes
- o No

<u>E15.3A2B1-3</u> Has sufficient funding been programmed to pay higher grade crew and support personnel for operation and support of the system and associated items?

- o Yes
- o No

<u>E15.3A2B1-4</u> For the displaced system, has sufficient funding been allocated to meet system crew manpower requirements where shortfalls exist in the gaining commands?

- o Yes
- o No

- <u>E15.3A2B1-5</u> Have sufficient funds been programmed to meet unit/DS/GS/Theater MHS and ammunition personnel manpower requirements specified in the MTOE/TDA for each MOS affected by the new systems?
  - o Yes
  - o No
- E15.3A2B1-6 Have sufficient funds been programmed to meet POL and ammunition resupply vehicle operator requirements specified in the MTOE/TDA for each MOS affected by the new system?
  - o Yes
  - o No

### E15.3A2B2 PERSONNEL REPLACEMENTS

- <u>E15.3A2B2-1</u> Have sufficient funds been programmed to train replacement personnel for operation and support of the new system over the useful life of the system?
  - o Yes
    - On what basis were the funding levels determined?
    - Determine if this prediction was accurate.
  - o No

### E15.3A3

CONSOLIDATED OPERATIONS/SUPPORT DATA

Review funding from processes E15.3A1 and E15.3A2. Combined results from E15.3A1B9 with the following:

E15.3A3-1 Explain funding problems associated with system crew, maintenance, MHE, of supply personnel manpower requirements. Include in this funding any problems associated with pay for higher grade crew and support personnel.

E15.3A3-2 Identify the impact on FUE/IOC.

<u>E15.3A3-3</u> Explain actions being taken to resolve the deficiencies that exist.

# E15.4A1 MATERIEL SYSTEM REQUIREMENT SPECIFICATION (MSRS)

E15.4A1-1 This question is applicable for milestones I, II, and III. Has the MSRS been prepared/updated with the results of activities and testing covered during the specified period?

- o Yes
  - Indicate if the results were provided to the organization responsible for the ICE.

o No

- E15.4A1-2 Have milestones been established to update the MSRS in a timely manner prior to MDR II or MDR III?
  - o Yes
    - -What are these milestone dates?
  - o No
- E15.4A1-3 Has the combat developer completed the Operational Employment Concept (Section I)?
  - o Yes
    - What pertinent data/information is missing?
    - State if the data/information reflect the deployment concept as it currently exists.
  - o No

- <u>E15.4A1-4</u> Has the combat developer completed the system specifications (Section 2)?
  - o Yes
  - o No
- <u>E15.4A1-5</u> Has the ODCS(RDA) completed the System and System Management Schedule (Section 3)?
  - o Yes
    - Determine if it is accurate.
  - o No
- E15.4A1-6 Has the Material Developer in coordination with the Operational Tester completed the section on Research and Development (Section 4)?
  - o Yes
    - State if the scope of the contractor and in-house R&D efforts seems reasonable.
    - Determine if all hardware elements requiring R&D have been identified.
    - What unique features of the R&D program will impact R&D costs?
    - Indicate if test milestones and requirements have been correctly identified.
  - o No
- E15.4A1-7 Has the ODCS(RDA) completed the Investment Phase (Section 5)?
  - o Yes
    - -Indicate whether all logistic requirements been considered.
  - o No

E15.4A1-8 Comment on your overall assessment of the MSRS. Do you feel the estimates provided are accurate? o Yes o No E15.4A2 COEA/CTEA E14.4A2-1 Has both the COEA and where appropriate CTEA been prepared/updated with the appropriate data for the phase of development that the system is in? o Yes - When were the initial documents prepared? - When were these documents updated? - Determine if applicable, whether these documents contain information on the current O&O plan, threat, and test results. o No E15.4A2-2 Were logistic support requirements and drivers adequately addressed in the COEA? o Yes o No E15.4A2-3 For non-major systems, was a cost-benefit analysis conducted prior to milestone I? o Yes o No

- E15.4A2-4
  Were cost inputs to the COEA validated by HQDA?
  - o Yes
  - o No
- <u>E15.4A2-5</u> Does the COEA address Logistics organization and concept impacts resulting from introduction of the new system?
  - o Yes
    - What logistics elements have been considered?
  - . o No
- E15.4A2-6 For the alternative being considered in the COEA, have the changes in organization, tactics and techniques, training and support from the baseline case been identified and costed?
  - o Yes
    - What did the results show?
    - Which alternative proved to be the best logistically?
  - o No

# E15.4A3 BASELINE COST ESTIMATE (BCE)

- E15.4A3-1 Has the BCE been prepared/updated with current data based on the development phase the system is in?
  - o Yes
    - When was the initial BCE prepared?
    - When was it updated?
  - o No

- E15.4A3-2 Was ILS program funding included in the initial BCE and updated at subsequent milestones?
  - o Yes
    - State whether the estimates were accurate and realistic.
  - o No
- <u>E15.4A3-3</u> Comment on how the development basis for projecting funding requirements for acquisition and operation of the system and its adequacy.
  - Explain
- E15.4A3-4 Was the BCE prepared according to DAPAM 11-2, 3, and 4?
  - o Yes
  - o No
- Explain how it was prepared.
- E15.4A3-5 Comment on whether a detailed work breakdown structured was used in developing the cost estimate.
  - Explain.
- E15.4A3-6 Is the systems programmed funding consistent with the BCE?
  - o Yes
  - o No
- Discuss the inconsistencies and why they have occurred.

# E15.4A4 INDEPENDENT COST ESTIMATE

E15.4A4-1 Has the ICE been prepared/updated by the COA or AMC using all available data based on the development phase the system has entered?

- o Yes
  - What system parameters were selected to develop the cost estimates (physical, performance, or operational characteristics)?
  - Indicate if the estimate includes the total life cycle of the system (i.e., develop, acquire, operate, and support the system).
  - What similar system was used to develop the ICE?
- o No
- How will the reasonableness of BCE be tested?

<u>E15.4A4-2</u> Do the results of the ICE indicate that the BCE was reasonable?

- o Yes
- o No
- Where does the BCE break down?
- What are the problems identified in the BCE?

E15.4A4-3 Was a cost sensitivity of the assumptions used in the BCE performed while developing the ICE?

- o Yes
  - What assumptions from the BCE were stacked and what were the results?
  - What assumptions from the program and/or its alternatives were studied and what were those results?
  - How were factors such as technical failures, configuration changes, schedule variations, change to testing requirement, prototype quantities, inflation rates, and deployment considered?

### o No

- How are potential funding problems going to be identified?
- How will potential funding problems due to schedule, development, testing, and deployment be identified and considered?

# E15.4A5 ARMY COST ANALYSIS PAPER

E15.4A5-1 Has an ACAP been prepared/updated by the COA using all available data based on the development phase the system has entered?

#### o Yes

- State whether the ACAP has been prepared in a timely manner.
- For systems in milestone I, what changes to the BCE have been identified by the ACAP.
- What changes to the BCE are suggested from the updated ACAP for systems in milestones II and III.
- What cost risks and uncertainties associated with the estimated have been highlighted in the ACAP?
- What cost issues associated with particular decisions about the system were highlighted in the ACAP?
- How has the time phasing of management reserve been recorded in the ACAP?
- What was the ASARC reaction to the ACAP?

#### o No

- How will system cost risks and uncertainties associated with the estimated be highlighted?
- How will cost issues associated with particular decisions about the system be highlighted?
- How will time phasing of management reserve be recorded?
- How will information about system life cycle cost be provided to DA ASARC principles, the Army Secretariat, and OSD?

# E15.4A6 ASSEMBLE COST ANALYSIS DOCUMENTATION FINDINGS

E15.4A6-1 Review processes E15.4A1 through E15.4A5 with the following in mind:

- Indicate if the cost estimate prepared/updated uses the information contained in the MSRS.
- State whether the cost estimate shows that adequate funding has been budgeted for the system life cycle.
- How were the results of the COEA and CTEA used for determining the type of system to meet the threat?
- Determine if the results of the BCE and ICE supports this decision.
- How can future COEA and CTEA be prepared to more accurately reflect alternative solutions to threats?
- Using the ACAP, what serious problems exist in the BCE?
- How will these problems affect the future of the system under development.

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